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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/217,873	12/21/1998	MARK RAPAICH	450.221US1	3830

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EXAMINER	
NATNAEL, PAULOS M	

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 07/29/2004 37

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/217,873	RAPAICH, MARK	
	Examiner	Art Unit	
	Paulos M. Natnael	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Welker et al., U.S. Patent No. **6,570, 546**.

Considering claim **1**, **Welker** et al discloses the following claimed subject matter, note;

A) the claimed video source capable of providing a digital YUV video signal, is met by computer 208, FIG. 6).

B) the claimed video output capable of connecting to a video display device, is met by difference engine 310, FIG.6. (see also col. 6, lines 1-22).

C) the claimed digital processor ...to the digital YUV signal provided by the video source and provides a corrected signal to the video output, is met by gamma correction circuit 308 (FIG.6).

d) applying "***a nonlinear gamma correction function" is implied because gamma correction, by definition, is a non-linear processing.***

Except for;

e) operable to execute software computationally employing a corrective algorithm;

Regarding e), Welker et al discloses a video display configuration detector which comprises a computer as a source and monitor as a receiver which in turn includes a gamma correction and YUV to RGB conversion among other functions. The Welker et al. system discloses, for example, a software algorithm to execute functions such as determining the physical arrangement of several monitors as shown in fig.10 and illustrated in figs. 7 and 11. Welker et al. does not specifically disclose employing a software algorithm for the gamma correction in 308 (fig.6). However, since the disclosure of Welker is for a computer system, it would have been obvious to those with ordinary skill in the art at the time the invention was made to modify the system of Welker et al. by providing a computer software to execute a gamma correction algorithm, so that the system of Welker et al is made faster and saves processing time.

Considering claim **2**, the claimed wherein the digital processor further employs a corrective algorithm that corrects at least one of color saturation correction, tint correction, brightness correction and contrast correction;

Regarding claim 2, Welker et al do not disclose employing correction algorithm for correcting one of color saturation, tint, brightness or contrast. However, the Examiner takes official notice in that it is well known in the art for a processor in the CRT of computer system or PC to employ an algorithm to correct the brightness, color saturation, hue or tint of the display, and therefore, it would have been obvious to the

skilled in the art at the time the invention was made to modify the system of Welker et al by providing a digital processor capable of employing a corrective algorithm to perform such color correction, in order for the display to have a better image quality, making it easier on the eye of the viewer.

Considering claim **3**, the claimed software module for user configuration of the digital processor that corrects the digital YUV signal;

Regarding claim 3, see rejection of claim 1(d).

Considering claim **4**, wherein the video sources comprise multiple sources selected from the group consisting of MPEG, NTSC, CVD, CD and satellite broadcast digital video signals, is met by the disclosure in col. 5, lines 41-58, the difference engine **300** in the computer, which is the data source, may utilize **MPEG compression**, i.e., the source data is converted into MPEG data.

Considering claim **5**, the claimed wherein the digital YUV video signal is encoded with a correction factor that is compensated for in applying the corrective algorithm to the digital YUV signal, is **implied** because digital YUV video signal is gamma corrected in the gamma correction 308 and the latter would utilize some sort of a correction **factor** (or **value** or coefficient) to process the gamma correction.

Considering claim **6**, **Welker** et al discloses all claimed subject matter, note;

a) receiving a YUV digital video signal, is met by interface device INTF 306, fig.6.

b) computationally applying a nonlinear gamma correction function to the digital YUV signal within a digital processor via software in a personal computer;

Regarding b), see rejection of claim 1(c)-(e) above.

c) providing a corrected digital YUV signal to an output for connection to a display device.

Regarding c), see rejection of claim 1(b) above.

Considering claim **7**, see rejection of claim 2.

Considering claim **8**, see rejection of claim 3.

Considering claim **9**, see rejection of claim 4.

Considering claim **10**, see rejection of claim 5.

3. Claim **11** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Welker** et al., U.S. Pat. No. 6,570,546 in view of **Warren** et al., U.S. Pat. No. 6,304,300.

Considering claim **11, Welker et al** discloses the following claimed subject matter, note;

b) the claimed video source capable of providing a digital YUV video signal, is met by computer 208, FIG. 6).

c) the claimed video output capable of connecting to a video display device, is met by difference engine 310, FIG.6. see also col. 6, lines 1-22

d) the claimed digital processor ...to the digital YUV signal provided by the video source and provides a corrected signal to the video output, is met by gamma correction circuit 308 (FIG.6).

e) applying "*a nonlinear gamma correction function*" ***is implied because gamma correction, by definition, is a non-linear processing.***

Except for;

a) the claimed personal computer system comprising a processor, a bus, a main memory, a system controller, and graphics controller.

f) operable to execute software computationally employing a corrective algorithm;

Regarding a), Welker et al. discloses a computer or PC system including PCI bus. The claimed list of items are well known in the art of any personal computer (PC) systems. A PC would not function as a computer without a processor, bus system, memory or a graphics engine or graphics controller.

In that regard, Warren et al. discloses a floating point gamma correction method and system in which Warren illustrates a block diagram (FIG.8) of a computer graphics

system [which is exemplary only in that the invention can operate within a number of different computer system configurations] within which the invention may be implemented or practiced. (Col. 9. Lines 50- 60) Warren's computer graphics system (FIG.8) includes, inter alia, a processor, a bus, a main memory, a graphics subsystem.

Accordingly, therefore, it would have been obvious to one of ordinary skill in the art to add Warren's teachings of the computer graphics system within which the gamma correction would be implemented in the system of Welker et al. in view of their related performance and the resulting expectation of similar gamma correction output.

Regarding f) see rejection of claim 1(e).

Response to Arguments

4. Applicant's arguments with respect to claims **1-11** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takashima et al. U.S. Pat. No. 6,504,551 discloses color correction device and method to correct hue, saturation, etc. using a number of algorithms.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ***Paulos M. Natnael*** whose telephone number is (703) 305-0019. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ***John Miller*** can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is ***703-872-9306.***

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PMN
July 18, 2004

MICHAEL H. LEE
PRIMARY EXAMINER